User Manual

ATLONA

1x4 HDMI™ Splitter with CAT5/6 Outputs and 1xLocal HDMI™ Output (Sender Only)

AT-HD-V14SS

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INTRODUCTION:

Atlona Technologies AT-HD-V14SS 1x4 HDMI™ Splitter with CAT5/6 Outputs and 1x Local HDMI™ Output (SENDER ONLY) is the perfect solution for those who want to display a single source on 4 or more displays using a Single Twisted Pair Cat5 or Cat6 Cable. AT-HD-V14SS is capable of HDTV resolutions up to: 1080p@110ft and 1080i@200ft.

Note:
A receiver unit (Balun) is required for each display and sold separately (Model: AT-HDRS or AT-HD15SRS).

FEATURES:

- HDMI™ over Single Cat5/6 (High Resolution Audio and Video)
- HDMI™ 1.3c and HDCP compliant
- 1080p@110ft (35m) and 1080i@200ft (60m)
- Supports 5.1 and 7.1 Digital Audio
- Silicon Image Chip-Sets allow 99.99% compatibility with all the AV gear (we only use Best)
- Built-In HDMI™ Repeater to avoid any signal loss if long input cable is used
- One Local HDMI™ output for monitoring or cascading to another AT-HD14SS, AT-HD-V14SS, AT-HD50SS, AT-HD19SS
- Built-in EDID manager for fast common setting among displays.
- Supports default HDMI™ EDID and records the EDID of selected display
- Extends up to 60m (200ft) (1080i) of output single CAT5 or Cat6 cable
- Extends up to 35m (110ft) (1080p) of output single CAT5 or Cat6 cable
- Wall-Mountable
- Easy installation

The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/100m) for best performance.

PACKAGE CONTENTS:

- 1x AT-HD-V14SS unit
- 1x 5V DC locking power supply unit (110/240v universal)
- 1x User's manual

SPECIFICATIONS:

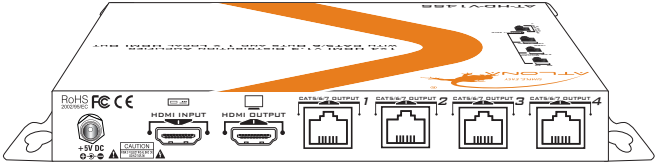
Model Name		AT-HD-V14SS	AT-HDRS	AT-HD15SRS
Technical				
Role of usage		1x4 Splitter / Sender	Long range receiver	Short range receiver
HDMI™ compliance		HDMI™ 1.3c		
HDCP compliance		Yes		
Video bandwidth		Single-link 225MHz (6.75Gbps)		
Video support		480i / 480p / 720p / 1080i / 1080p60 12-bit		
Transmission		Full HD (1080p): 110ft (35m) [CAT5/6] HD (720p/1080i): 200ft (60m) [CAT5/6]		
Audio support		Surround sound (up to 7.1ch) or stereo digital audio		
Equalization		N/A	8-level digital	None
Input TMDS signal		1.2 Volts (peak-to-peak)		
Input DDC signal		5 Volts (peak-to-peak, TTL)		
ESD protection		[1] Human body – ±19kV (air-gap discharge) & ±12kV (contact discharge) [2] Core chipset – ±8kV		
Input		1x HDMI™	1x RJ45	1x RJ45
Output		1x HDMI™ + 4x RJ45	1x HDMI™	1x HDMI™
HDMI™ connector		Type A (19-pin female)	Type A (19-pin female)	Type A (19-pin male)
RJ45 connector		WE/SS 8P8C with 2 LED indicators		
Mechanical				
Housing		Metal enclosure	Metal enclosure	Plastic molding
Dimensions [L x W x H]	Model	4.3" x 7.6" x 1.1" (110 x 194 x 27mm)	3.2" x 2.4" x 1" (80 x 60 x 25mm)	1.8" x1" x 0.8" (45 x 25 x 20mm)
	Package	1'1" x 7.9" x 3.7" (330 x 200 x 95mm)	10.6" x 6.9" x 3.2" (270 x 175 x 80mm)	6.7" x 4.5" x 1.6" (170 x 115 x 40mm)
Weight	Model	1.3 lbs (588g)	5oz (154g)	1oz (22g)
	Package	2.2 lbs (985g)	1 lb (453g)	3oz (90g)
Fixedness		Wall-mount with ears	Wall-mount case	Direct plug-in
Power supply		5V DC	5V DC	None
Power consumption		10 Watts (max)	1 Watt (max)	0.5 Watt (max)
Operation temperature		32~104°F (0~40°C)		
Storage temperature		-4~140°F (-20~60°C)		
Relative humidity		20~90% RH (no condensation)		

PANEL DESCRIPTIONS:

5.1. Front Panel

POWER: bright - power on; dark - power off.
SIGNAL: bright - HDMI™ source signal is detected; dark - no HDMI™ signal.

5.2. Rear Panel



+5V DC: Connect to 5V DC power supply unit
HDMI INPUT: Connect to one HDMI™ source device
HDMI OUTPUT: Connect to one HDMI™ display or cascade to AT-HD14SS, AT-HD19SS, AT-HD50SS or AT-HD-V14SS
CAT5/6/7 OUTPUT 1 - 4: Link to each HDMI™ display via a CAT5/6 cable with a Receiver Unit AT-HDRS or AT-HD15SRS

5.3. Top Panel

EDID LEARNING vs. Default EDID: When the DIP switch is set to Default EDID, users can adjust desired EDID setting for the default EDID profile. When the DIP switch is set to EDID LEARNING, the AT-HD-V14SS will learn the EDID from the device connected to the HDMI™ output port. Please see EDID LEARNING section for detail information.

2D vs. 3D: Choose between 2D or 3D source content

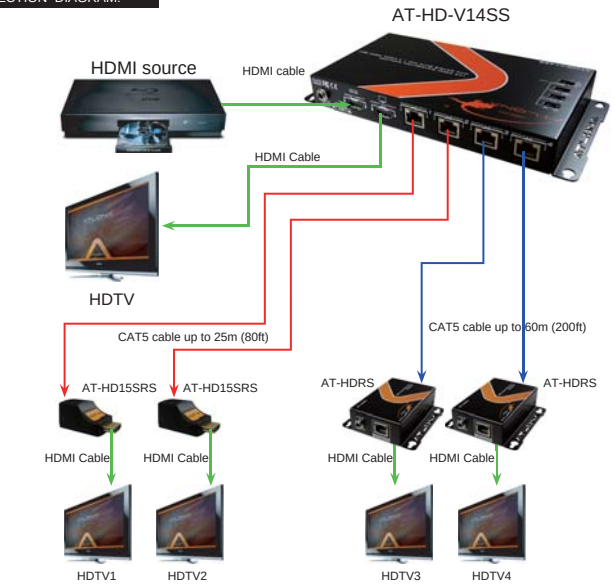
2-CH vs. Multi-CH Bitstream: Choose between stereo audio or surround sound multi-channel audio source content

1080i / 720p vs. 1080p: Choose between HD 1080i / 720p or Full HD 1080p source content

INSTALLATION:

1. Turn off all devices, including the displays.
2. Connect the HDMI™ source to the HDMI™ INPUT on the AT-HD-V14SS.
3. Connect to each Receiver Unit (AT-HDRS or AT-HD15SRS) with a CAT5/6 cable via RJ45 ports.
4. Connect a HDMI™ displays to each HDMI™ OUTPUT on each Receiver Unit with a HDMI™ cable.
5. Plug in the 5V DC power supply units to the locking power jacks on the Receiver Units and the AT-HD-V14SS.
6. Connect one HDMI™ display or cascading device to the HDMI™ OUTPUT port with a HDMI™ cable.
7. Turn on all devices.
8. If you see flickering or blinking image on the display, adjust the rotary control switch on the Receiver Unit (AT-HDRS) to improve the cable skew. 0 stands for the strongest HDMI™ signal level for longest possible transmission length while 7 stands for the weakest HDMI™ signal level for short transmission length. Try adjusting the signal level from 7 to 0 to find the optimal setting for the HDMI™ over CAT5 transmission.

CONNECTION DIAGRAM:



EDID LEARNING:

1. To learn EDID from desired HDMI™ display, connect the display to the HDMI™ output port that needs to provide the EDID information for the AT-HD-V14SS to learn from.
2. Dial the DIP switch from Default EDID to EDID LEARNING and stay at the Learn EDID position.
3. The SIGNAL (green LED) will blink for a few seconds then stop to indicate the EDID learning is complete.
4. Do not dial the DIP switch back to Default EDID as doing so will reset the EDID profile.
5. To learn the EDID from another device, please repeat step 1 to 3.

NOTICE:

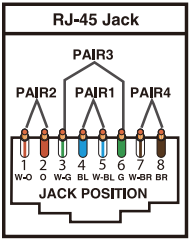
1. When adjusting the signal level on the receiver unit, please dial the rotary control switch on the Receiver Unit (AT-HDRS) from 0 to 7 and stop turning the rotary switch whenever the audio/video is playing normally. Inappropriate signal level setting may cause overpowering issue that would shorten the product life significantly!
2. If the DVI or HDMI™ device requires the EDID information, please use AT-DVISync or AT-HDSync EDID Reader/Writer to retrieve and provide DVI or HDMI™ display EDID information.
3. All HDMI™ over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz UTP cable and ASTRODESIGN Video Signal Generator VG-859C.
4. The transmission length is largely affected by the type of Cat-5/5e/6 cables, the type of HDMI™ sources, and the type of HDMI™ display. The testing result shows solid UTP cables (usually in the form of 1,000ft bulk cables) can transmit a lot longer signals than stranded UTP cables (usually in the form of fixed length patch cords). Shielded STP cables are better suited than unshielded UTP cables. A solid UTP Cat-5e cable shows longer transmission range than stranded STP Cat-6 cable. For long extension applications, solid UTP/STP cables are the only viable choice.
5. EIA/TIA-568-B termination (T568B) for Cat-5/5e/6 cables is recommended.
6. To reduce the interference among the unshielded twisted pairs of wires in Cat-5/5e/6 cable, one can use double shielded STP cables to improve EMI problems, which is worsen in long transmission.
7. Because the quality of the category cables has the major effect on how long the transmission limit can achieve and how good is the received picture quality, the actual transmission range is subject to one's choice of Cat-5/5e/6 cables. For desired resolutions greater than 1080i or 1280x1024, a Cat-6 cable is recommended.
8. If your HDMI™ display has multiple HDMI™ inputs, it is found that the first HDMI™ input [HDMI™ input 1] generally can produce better transmission performance among all HDMI™ inputs.

PERFORMANCE GUIDE:

Performance rating		Type of category cable		
Wiring	Shielding	CAT5	CAT5e	CAT6
Solid	Unshielded (UTP)	★★★	★★★★	★★★★★
	Shielded (STP)	★★★	★★★	★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination		Please use EIA/TIA-568-B termination (T568B) at any time		

RJ45 / CAT5 REFERENCE:

Data Link TIA/EIA-568-B		
PIN	**Color**	**Function**
1	W-O	TX0-
2	O	TX0+
3	W-G	TX1-
4	BL	TX2-
5	W-BL	TX2+
6	G	TX1+
7	W-BR	TXC-
8	BR	TXC+



ATLONA PRODUCT REGISTRATION:

Thank you for purchasing this Atlona product — we hope you'll enjoy it.

We also hope that you'll take a few moments to register your new purchase. Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.
At Atlona, we respect and protect your privacy and assure you that your registration information is completely secure. Of course, Atlona product registration is totally voluntary and failure to register will not diminish your limited warranty rights.

To register go to **www.atlona.com/registration**

SAFETY INFORMATION:

Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture.

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug.

Doing so will void the warranty and safety features.

This equipment should be installed near the socket outlet and the device should be easily accessible in case it requires disconnection.

Precautions

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product or cause fires.

In the event of an electrostatic discharge, this device may automatically turn off. If this occurs, unplug the device, and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins, or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements and swimming pools.

Use only accessories recommended by ATLONA to avoid fire, shock or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning. Do not use cleaning fluid or aerosols, which could enter the unit and cause damage, fire or electrical shock. Some substances may also mar the finish of the product.

Never open or remove unit panels or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-HD-V14SS. Opening the product will void the warranty.

Do not attempt to service the unit. Instead disconnect it and contact your Authorized ATLONA reseller or contact ATLONA directly.

WARRANTY:

1. LIMITED WARRANTY

Atlona Technologies warrants that (a) its products (the "Product") will perform substantially in accordance with the accompanying written materials for a period of 3 years from the date of receipt and (b) that the Product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to Customer.

2. CUSTOMER REMEDIES

Atlona Technologies and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' option, either return of the price paid for the Product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of Customer's receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period or 3 year, whichever is longer.

3. NO OTHER WARRANTIES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ATLONA TECHNOLOGIES AND ITS SUPPLIERS DISCLAIM ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCT AND ANY RELATED WRITTEN MATERIALS. THIS LIMITED WARRANTY GIVES CUSTOMER SPECIFIC LEGAL RIGHTS. CUSTOMER MAY HAVE OTHER RIGHTS DEPENDING ON THE JURISDICTION.

4. NO LIABILITY FOR DAMAGES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL ATLONA TECHNOLOGIES OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUEN-TIAL, OR INDIRECT DAMAGES FOR PERSONAL INJURY, LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF ATLONA TECHNOLOGIES HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY CASE, ATLONA TECHNOLOGIES' AND ITS SUPPLIERS' ENTIRE LIABILITY UNDER ANY PROVISION OF THIS AGREEMENT SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU FOR THE PRODUCT. BECAUSE SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.